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28th ANNUAL McGRAW-HILL FALL SURVEY OF
PRELIMINARY PLANS FOR NEW PLANTS AND EQUIPMENT, 1981-83

Supply-side economics, off to a rocky start in 1981, may be in for more trouble in 1982.

Contrary to supply-siders' hopes that business tax cuts would spur a burst of capital spending next year, McGraw-Hill's recently conducted survey of companies' plans points to no real increase at all in U.S. capital investment in 1982. The survey found that American firms plan to raise expenditures on new plant and equipment 9.6% next year to $358 billion (Table I). But, at the same time, respondents said they also expect capital goods prices to rise by 9.6% (Table II). Hence, despite the new accelerated depreciation incentives enacted into law last August, no "real" gain in capital spending is projected for 1982.

Nonetheless, the survey does contain some good news. For one thing, firms think their product prices will rise by just 7.8% next year (Table II), which compares with last fall's projection of 9.9% product price inflation in 1981. In other words, inflation expectations may be on the wane, so the Reagan Administration could attain at least one of its goals next year.

Manufacturing respondents are also confident that their sales, after removing the effects of inflation, will rise dramatically next year by about 6% (Table IV). However, respondents' view of overall economic growth next year is that real gross natonal product (GNP) will rise by

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just 2% to 3% (Table V). So if the economic forecast is correct, most manufacturers' sales forecasts will prove overly optimistic.

The McGraw-Hill survey was conducted in September and October. It drew responses from nearly 500 companies that account for a third of capital spending in the U.S. The dollar figures for industry capital spending represent spending by all companies, however, not just the spending of companies in the survey sample.

What Happened to the Investment Boom?

Last August, President Reagan signed into law the center-piece of his economic program--the Economic Recovery Tax Act of 1981. Among other things, the act includes new accelerated depreciation rules aimed at boosting companies' cash flow from capital investment. And, in fact, the Congressional Joint Committee on Taxation estimates that the new rules will tack $10 billion onto business' cash flow in 1982. Such an increase would make investment projects more profitable after taxes and would also make available more funds to plow back into plant and equipment.

Given the hopes pinned on the tax cut, then, the survey result of a 0% increase in real capital spending in 1982 must be considered disappointing. At the same time, the result is understandable: For while it is true that business got a tax cut it should be happy with, business has not got an economy it is happy with.

Adjusted for inflation, GNP fell in both the second and third quarters this year, and a further drop in the fourth quarter is widely anticipated. Along with the GNP decline, the capacity utilization rate of the country's factories, mines, and utilities has slipped from a high

of 78% in January to less than 76% at present, far below industry's preferred rate of 90%.

A sluggish economy coupled with plenty of spare capacity means that many companies will wait and see what happens to demand next year before committing themselves to major capital projects. For no matter what kind of a tax break a company gets for buying new plant and equipment, it will not likely invest unless it can foresee sufficient demand for its products and services. In a slow-growth economy, moreover, some firms are faced with losing money, so that a tax break for them is meaningless since no taxes would be paid anyway.

Tables III and IV show that survey respondents do expect a strong sales pickup next year. But with sales currently weak, that pickup would take time to materialize, implying that capital spending plans would be put on hold until, say, the second half of next year. The point is that capital investment does not usually form the cutting edge of recovery, but rather follows behind increases in demand.

And even if many firms wanted to act on their belief in a strong increase in demand and thus wanted to tool up in advance, they would still have to contend with the big bugaboo of the Reagan economy--super-high interest rates. Meanwhile, internal financing is running up against the constraint of weak profits and the promise of further profit weakness in an economy that remains soft.

Chart I puts into historical context the financial dilemma that U.S. business finds itself in. Note that in the late 1970s, excellent

Chart I. The Financial Crunch on 1982 Spending

	Percent Change			
Year	Capital Expenditures	Real Capital Expenditures	Pre-Tax Corporate Profit	Corporate Bond Rate
1977	15.5%	9.5%	16.6%	8.0%
1978	16.7	8.2	12.6	8.7
1979	17.0	7.7	6.1	9.6
1980	9.3	0.2	-7.2	11.9
1981	10.5	1.4	6.4	14.5
1982	9.6	0.0	NA	NA

NOTES: Corporate profits are adjusted for inventory profits and for differences between depreciation charges and replacement costs of capital assets. The capital spending figures for 1981 and 1982 are from the McGraw-Hill survey. The 1981 profits figure is the first half of 1981 versus the first half of 1980. The 1981 bond rate is estimated.

years for capital spending, profits grew briskly, thus giving industry greater wherewithal to buy new plant and equipment. (Profit growth in part spurs investment in the following year, so that capital spending growth in 1979 was probably helped more by 1978's healthy profit increase than it was hurt by 1979's relatively slow advance in profits. Similarly, the surge of capital spending in 1977 was in part fueled by a 25% jump in profits in 1976.)

After coming off a poor profit performance in 1980, business will not make up much ground in 1981, thus leaving many companies in a fairly

weak financial position as they enter 1982. The impetus, then, is toward holding back on capital projects until fiscal health is restored.

The interest rate picture, of course, is also dismal. Corporate bond rates are 80% higher than they were in 1977, and few companies are willing to commit themselves to 15+% interest rates for long periods of time. A weakening economy and the Federal Reserve Board's squeeze on inflation should help bring interest rates down, but financing a huge government deficit will prevent rates from falling sharply. Thus, again, capital projects will get pushed toward the sidelines.

Business could also think about financing 1982 expansion via equity issues, but such thoughts would likely be cast aside quickly in the wake of a 15% fall in stock market prices since last May.

In short, the cost of external funds will remain a roadblock to capital spending in 1982, while in the short term the generation of internal funds will remain sluggish. True, firms expect the economy to register real growth of 2% to 3% next year; but demand and capacity utilization are so low at present that business perceives little need to add to its existing stock of new plant and equipment--new depreciation rules notwithstanding. These new rules will be important when the time comes for business to dust off its capital spending plans and think about expansion. But the time is not right now.

The Industrial Mix: An Alternative View of Slow Spending

To put a happier face on the survey results, consider the possibility that flat capital spending in 1982 may not be due to a

general malaise afflicting all of business; instead, it might be due to special factors influencing particular industries.

If such is the case the Reagan policy to boost capital investment should not be judged too harshly by an apparently lackluster response from business thus far. For some key industries, that is, the time is just not right to accelerate purchases of new plant and equipment. Developments in the past couple of years--like a doubling of oil prices, growing energy conservation, and an office building boom--may have a lot more bearing on some industries' 1982 capital spending than anything that supply-side economics could deliver in the short term.

More specifically, note on Table I that two very large industries--electric utilities and trade and services--plan very small increases in plant and equipment purchases next year. If these two industries were ignored and all other industries' spending materialized as planned, 1982 capital spending would be up by 12.4%--2.6% in real terms.

For electric utilities, the prospect of little real long-term growth in demand coupled with the political problems of nuclear power would likely lead to little gain in capital investment no matter what tax incentives were offered. In addition, utilities are hesitant to raise funds for investment because getting rate increases sufficient to offset the cost of capital will be difficult.

As for trade and services, investment by retailers is tied to growth in housing, which has been beaten into the ground by high interest rates. So pro-investment tax breaks won't mean anything until rates come down and housing goes up. Sluggish growth of trade and services

investment may also, in part, reflect a turnaround in the office building boom of the past few years. So again, no matter what the depreciation schedules are, if there is an overload of office space in the market new offices will not be built.

Two other obvious special cases are the aerospace and airlines industries. Even before the air trafffic controllers' strike, air travel had been nosing down due to a runup in fares, in turn due to sharp fuel price increases. With domestic traffic down 6% from a year ago, airlines have cut back on new airplane orders; producers consequently plan to pare their own capital spending, despite the promise of increased orders from the military. (In the first two-thirds of 1981, new orders for aircraft and parts were off 13% from a year earlier.)

Other energy-related developments might also be detracting from next year's capital spending performance, developments that would have occurred with or without a new supply-side tax package. For example, as oil companies rushed to find more energy in the past couple of years, the petroleum industry's capital spending gushed forth by 28% in 1980 and 33% in 1981. With a record number of holes being drilled it was questionable how long the accelerated pace of investment could be sustained. The answer, apparently, was through 1981. Next year, though still adding a significant boost to overall capital expenditures, the petroleum industry's spending advance is expected to drop back to 16.8%.

Gas utilities, too, have been on something of a capital spending spree in recent years, participating in pipelines and port construction (geared to liquefied natural gas). That spending, too, may have peaked, for reasons unconnected to legislative developments in Washington.

The recent capital spending experience of the six industries cited above is summarized in Chart II. All of these industries, which together account for half of total plant and equipment expenditures,

Chart II. Deceleration in Investment Plans

	----% Change in Capital Spending----					Share of 1980 Spending
	1978	1979	1980	1981[e]	1982[e]	
Trade & Services	21.5%	15.4%	3.2%	9.0%	4.7%	27.7%
Electric Utilities	10.8	12.3	1.7	5.4	4.3	9.5
Aerospace	60.2	63.7	33.4	-2.1	-5.5	2.4
Airlines	42.4	29.8	0.0	5.5	-11.1	1.4
Petroleum	9.9	16.2	27.6	32.6	16.8	7.0
Gas Utilities	16.7	18.6	16.0	18.0	8.7	2.5
						50.5%

[e]Estimated from McGraw-Hill's fall survey.

are slated to contribute less to investment growth in 1982 than they did in 1981. And it is possible that none of these industries' plans would be much different even if the economy were a lot stronger now and even if investment-related tax breaks were greater.

On the other side of the ledger, some industries plan to accelerate capital spending in 1982. The rubber industry, for example, reduced its purchases of plant and equipment in 1980, and will increase 1981 spending by only about 6%. With emphasis on expanding radial tire capacity, and with the expectation that sales will increase smartly next year, rubber companies are scheduling a 21% advance in capital spending for 1982.

Another industry whose capital expenditures have grown slowly in the past couple of years is iron and steel. But spurred by hopes of cutting costs and raising productivity, the industry is planning to put a lot of money into electric furnaces and continuous casters. At the same time, investment is also targeted for the booming tubular steel business that supplies the oil industry. The result: Iron and steel spending is slated to jump 14.5% in 1982.

Other industries expecting large increases in plant and equipment purchases next year include nonferrous metals, machinery, instruments, food, mining, and railroads.

Prices: Is the Spiral Unwinding?

Along with stimulating rapid economic and investment growth, Reagan Administration goals also include getting inflation down. And on this last score, the survey suggests, the White House may be more hopeful.

Business currently expects prices of its products to rise by 7.8% next year, 2.1 percentage points below the year-ago projection of 9.9% inflation for 1981. (So far this year, the broad measure of inflation--the GNP price deflator--is rising at about a 9% rate.)

In particular, the petroleum industry's inflation expectations are down sharply. In the fall of 1979, oil companies projected price increases of 15.7% for petroleum products in 1981. (As of August, fuel prices were up exactly 15.7% compared to a year earlier, while gasoline prices were higher by 9.5%) In the current survey, the petroleum industry said that prices should increase by just 7.9% in 1982.

What's more, industries that rely heavily on petroleum have also significantly dropped their inflation forecasts from a year ago, as has another energy provider--the gas utilities.

More good news is also coming in from the other sector that plays a key role in overall inflation--the food and beverages industry, which currently expects 1982 prices to rise by only 5.3%. That compares with the industry's 1981 forecast of 8.7% food inflation, a forecast that is right in line with developments thus far this year.

The decline in energy and food inflation expectations is shown in Chart III.

Chart III. Energy and Food Inflation Expected to Drop

	Industry's Expected Price Increase for Its Own Products (% Change)	
	1981	1982
Petroleum	15.7%	7.9%
Electric Utilities	13.4	8.7
Gas Utilities	18.3	11.6
Airlines	11.5	7.4
Chemicals	10.3	8.6

NOTE: The 1981 projections are from McGraw-Hill's 1980 fall capital spending survey. The 1982 projections are from the current survey.

Turning to business' projections of plant and equipment price rises, the survey results are less sanguine. The forecast is for a 9.6% jump in capital goods prices, down only marginally from last year's 10.1% projection for 1981. Expectations of near double-digit inflation in plant and equipment prices may be another reason that business plans to hold back on capital spending in 1982.

Will the Boom Come In '83?

Thanks to the new accelerated depreciati n allowances, business can look forward to increased cash flow from new investments. However, investment will apparently not do much in 1982. Does it follow, then, that 1983 will be a make-up year, that capital expenditures will rush forward next year?

On the face of it, the survey's early indication for 1983 is not encouraging--investment will be up just 4.8% over 1982. And that would surely represent a decline in capital spending once inflation was taken out.

However, the survey's two-year-out forecasts are typically well below the final outcome. The reason, possibly, is that when firms report capital spending plans for two years ahead they report spending only for projects that have already been approved. Subsequently, new projects are added and total spending rises. In addition, companies may underestimate the rate of inflation two years out, so that capital expenditures reported in nominal terms are understated.

The survey's underestimation of capital spending two years ahead during the past decade is shown in Chart IV. On average, the 2-year-ahead forecasts are low by about eight percentage points. (By contrast, the 1-year-ahead forecasts excluding the disastrous 1975 projection are off by an average of less than three percentage points in absolute terms.)

The implication is that, if the survey performs as it has in the past, capital spending in 1983 could rise by some 13%--not a boom, but a healthy performance.

Chart IV

	% Change in Capital Spending		
	Actual	1-Year-Ahead Forecast	2-Year-Ahead Forecast
1969	12.5%	7.6%	-3.0%
1970	6.1	8.3	-4.1
1971	2.8	2.4	1.3
1972	10.8	6.9	4.6
1973	14.5	10.6	2.2
1974	14.0	13.6	4.1
1975	0.5	30.2	3.1
1976	8.7	8.8	8.9
1977	15.5	13.0	3.5
1978	16.7	11.1	4.0
1979	17.0	9.9	4.9
1980	9.3	9.6	3.3
1981	10.5	11.9	3.6
1982	NA	9.6	8.8
1983	NA	NA	4.8
Mean absolute error		2.9[a]	8.4

NOTES: The 1-year-ahead forecasts are taken from McGraw-Hill surveys conducted in the fall before the forecast year. The 2-year-ahead forecasts are taken from McGraw-Hill surveys conducted in the fall a year and four months prior to the start of the forecast years.

[a]Excludes 1975.

Meanwhile, certain industries have already made large capital spending plans for 1983. Among these are iron and steel, and mining, which project 23% and 26% hikes, respectively, in plant and equipment purchases. Industries that currently expect increases of 15% or better two years out include nonferrous metals, machinery, fabricated metals, paper, and airlines.

Energy Conservation

In 1982, the survey found, business expects to devote 3.4% of its capital spending to energy conservation, the same proportion as in 1981

(Table VI). If this goal is attained, and if business also spends $357.86 billion on plant and equipment as planned, then energy conservation spending would reach $12.2 billion.

Among the major sectors, manufacturing plans to allot 4.5% of spending to energy conservation, compared to 2.5% for nonmanufacturing. Within manufacturing, durables and nondurables producers expect to allocate 4.6% and 4.1% of capital budgets, respectively, to energy conservation. Industries planning to devote the largest shares of capital expenditures to energy conservation are paper (7.5%), rubber (7.4%), iron and steel (7.3%), nonferrous metals (6.7%), other durables (6.2%), and textiles (5.9%).

Most nonmanufacturers expect to devote relatively small proportions of capital spending to energy conservation, although the mining and airline industries are targeting 3.6% and 3.1%, respectively.

Notes on the Survey

Results in this report are based on the responses of about 500 firms to a survey taken in September and October. These firms account for one-third of capital spending in the country (Table VII). For capital spending, firms supplied dollar estimates of future plant and equipment expenditures. Estimates for each year were summed by industry, and percentage changes between years were calculated. Each industry's percentage change for 1980-81, derived from the sample firms, was then applied to the industry's total capital spending in 1980 in order to derive the industry's total estimated capital spending in 1981. The 1981-82 percentage change was applied to the estimated 1981 total

industry figure to derive the industry's total estimated 1982 capital spending. The procedure was the same for 1983. Firms with extreme percent changes in spending (outliers) were removed from the sample on a year-by-year basis. The source of the actual 1980 capital spending is the U.S. Department of Commerce.

Once each industry's total estimated capital spending was derived, the figures were summed to derive estimates for the various aggregate groupings--durables, nondurables, all manufacturing, all nonmanufacturing, and all business.

All data presented in this report other than the capital spending figures are based on percentage--rather than dollar--answers supplied by the sample firms. Percentage responses were weighted by size of firm within an industry to derive industry figures. Figures for the aggregates were then derived by weighting each industry by size. The weighting scheme varied according to the data being processed. For example, percentage changes in sales and product prices were weighted by sales levels while percentage changes in plant and equipment price expectations were weighted by capital spending.

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NOTE: The other durables category listed in the tables includes lumber, furniture, jewelry, toys, and transportation equipment other than autos and aerospace. Other nondurables includes apparel, tobacco, printing and publishing, and leather. The trade and services category includes retail and wholesale trade, banking, holding companies, insurance companies, hotels, laundries, and personal and business services. The communications and other category includes construction firms and transportation services other than airlines and railroads.

TABLE I

PLANS FOR CAPITAL SPENDING
(Billions of Dollars)

Industry	1981 Estimated	1982 Planned	1981-82 % Change	1983 Planned
Iron & Steel	$ 3.36	$ 3.85	14.5%	$ 4.75
Nonferrous Metals	3.62	4.28	18.2	4.93
Electrical Machinery	10.22	11.28	10.4	12.33
Machinery	12.84	14.64	14.0	16.92
Autos, Trucks & Parts	10.89	12.00	10.2	12.44
Aerospace	6.88	6.50	- 5.5	6.19
Fabricated Metals	2.75	2.77	0.7	3.23
Instruments	2.29	2.67	17.0	2.95
Stone, Clay & Glass	2.97	3.26	9.8	3.11
Other Durables	8.31	9.36	12.6	10.53
TOTAL DURABLES	64.13	70.61	10.1	77.38
Chemicals	13.08	13.74	5.1	14.39
Paper & Pulp	6.61	6.86	3.7	7.88
Rubber	1.84	2.23	21.2	2.46
Petroleum	27.43	32.04	16.8	35.08
Food & Beverages	7.62	9.19	20.6	8.23
Textiles	1.71	1.75	2.5	1.78
Other Nondurables	6.97	7.88	13.1	6.86
TOTAL NONDURABLES	65.26	73.69	12.9	76.68
ALL MANUFACTURING	129.39	144.30	11.5	154.06
Mining	16.98	21.19	24.8	26.64
Railroads	4.09	5.05	23.4	5.51
Airlines	4.23	3.76	-11.1	4.34
Electric Utilities	29.64	30.91	4.3	30.15
Gas Utilities	8.64	9.39	8.7	10.07
Communications & Other	44.47	49.88	12.2	49.40
Trade & Services	89.19	93.38	4.7	94.91
ALL NONMANUFACTURING	197.24	213.56	8.3	221.02
ALL BUSINESS	326.63	357.86	9.6	375.08

NOTE: The figures in this table represent total industry spending in the U.S., and not just the spending of firms in the survey. The figures are not adjusted for inflation; thus year-to-year changes are in nominal, not real, terms. Derivation of the data is discussed in the text under "Notes on the Survey."

TABLE II

INFLATION EXPECTATIONS

INDUSTRY	----Expected % Change, 1981-82--- Plant & Equipment Prices	Product Prices
Iron & Steel	9.0%	10.1%
Nonferrous Metals	10.4	8.8
Electrical Machinery	9.8	6.6
Machinery	9.1	8.7
Autos, Trucks & Parts	9.9	9.2
Aerospace	9.4	9.4
Fabricated Metals	10.6	6.3
Instruments	10.1	6.1
Stone, Clay & Glass	9.9	8.5
Other Durables	9.7	9.7
TOTAL DURABLES	9.7	8.3
Chemicals	9.8	8.6
Paper & Pulp	10.2	9.6
Rubber	10.7	9.5
Petroleum	10.7	7.9
Food & Beverages	9.5	5.3
Textiles	8.0	8.1
Other Nondurables	8.9	9.0
TOTAL NONDURABLES	10.0	7.7
ALL MANUFACTURING	9.8	8.0
Mining	11.5	10.1
Railroads	10.1	9.5
Airlines	10.0	7.4
Electric Utilities	9.6	8.7
Gas Utilities	10.3	11.6
Communications & Other	7.9	6.7
Trade & Services	9.6	7.1
ALL NONMANUFACTURING	9.4	7.7
ALL BUSINESS	9.6	7.8

TABLE III

SALES EXPECTATIONS
(Billions of Dollars)

INDUSTRY	1981 Estimated	1982 Expected	1981-82 % Change
Iron & Steel	$ 72.6	$ 84.0	15.7%
Nonferrous Metals	55.3	64.6	16.9
Electrical Machinery	135.5	152.0	12.2
Machinery	202.1	229.8	13.7
Autos, Trucks & Parts	140.7	167.6	19.1
Aerospace	56.2	59.3	5.5
Fabricated Metals	125.8	143.6	14.2
Instruments	49.6	54.9	10.8
Stone, Clay & Glass	50.6	58.1	14.8
Other Durables	114.8	129.1	12.5
TOTAL DURABLES	1,003.2	1,143.0	13.9
Chemicals	179.6	209.8	16.8
Paper & Pulp	77.5	90.8	17.1
Rubber	46.6	53.5	14.8
Petroleum	197.0	217.5	10.4
Food & Beverages	267.7	304.6	13.8
Textiles	51.0	57.6	13.0
Other Nondurables	143.6	164.1	14.3
TOTAL NONDURABLES	963.0	1,097.9	14.0
ALL MANUFACTURING	1,966.2	2,240.9	14.0
Mining	NA	NA	13.9
Railroads	NA	NA	11.4
Airlines	NA	NA	13.7
Electrical Utilities	NA	NA	13.7
Gas Utilities	NA	NA	13.6
Communications & Other	NA	NA	14.0
Trade & Services	NA	NA	10.2

TABLE IV

REAL SALES EXPECTATIONS
(Billions of 1981 Dollars)

INDUSTRY	1981 Estimated	1982 Expected	1981-82 % Change
Iron & Steel	$ 72.6	$ 76.7	5.6%
Nonferrous Metals	55.3	59.8	8.1
Electrical Machinery	135.5	143.0	5.6
Machinery	202.1	212.1	5.0
Autos, Trucks & Parts	140.7	154.7	10.0
Aerospace	56.2	54.0	-4.0
Fabricated Metals	125.8	135.7	7.9
Instruments	49.6	51.9	4.7
Stone, Clay & Glass	50.6	53.8	6.4
Other Durables	114.8	118.0	2.8
TOTAL DURABLES	1,003.2	1,059.7	5.6
Chemicals	179.6	194.2	8.2
Paper & Pulp	77.5	83.4	7.6
Rubber	46.6	49.1	5.3
Petroleum	197.0	201.9	2.5
Food & Beverages	267.7	290.3	8.4
Textiles	51.0	53.5	4.9
Other Nondurables	143.6	151.3	5.3
TOTAL NONDURABLES	963.0	1,023.7	6.3
ALL MANUFACTURING	1,966.2	2,083.4	6.0
Mining	NA	NA	3.8
Railroads	NA	NA	1.9
Airlines	NA	NA	6.3
Electric Utilities	NA	NA	4.9
Gas Utilities	NA	NA	2.0
Communications & Other	NA	NA	7.3
Trade & Services	NA	NA	3.1

BUSINESS' VIEW OF THE ECONOMY IN 1982

	------Percent of Companies Reporting------				---------Weighted by Size of Company------			
INDUSTRY	Recession	Slow Growth	Normal Growth	Rapid Growth	Recession	Slow Growth	Normal Growth	Rapid Growth
Iron & Steel	16.7%	50.0%	33.3%	0.0%	9.3%	34.3%	56.4%	0.0%
Nonferrous Metals	0.0	25.0	37.5	37.5	0.0	66.1	11.6	22.3
Electrical Machinery	0.0	23.8	38.1	38.1	0.0	8.4	80.5	11.1
Machinery	13.2	31.6	42.1	13.2	0.5	60.8	35.0	3.8
Autos, Trucks & Parts	0.0	57.1	42.9	0.0	0.0	37.8	62.2	0.0
Aerospace	0.0	25.0	50.0	25.0	0.0	13.5	51.3	35.2
Fabricated Metals	5.3	52.6	31.6	10.5	0.0	34.5	59.2	6.3
Instruments	30.0	30.0	20.0	20.0	18.5	2.4	38.5	40.6
Stone, Clay & Glass	5.6	22.2	50.0	22.2	0.0	29.1	56.9	14.0
Other Durables	11.8	35.3	29.4	23.5	0.0	55.2	41.8	3.0
TOTAL DURABLES	8.9	34.2	38.0	19.0	2.8	34.2	49.3	13.6
Chemicals	12.0	36.0	44.0	8.0	0.7	27.3	66.8	5.2
Paper & Pulp	12.5	37.5	29.2	20.8	0.0	50.2	28.0	21.8
Rubber	5.6	22.2	50.0	22.2	0.2	23.9	74.3	1.6
Petroleum	5.9	29.4	35.3	29.4	0.0	41.5	27.7	30.8
Food & Beverages	0.0	47.1	23.5	29.4	0.0	60.3	16.3	23.4
Textiles	14.3	28.6	19.0	38.1	0.0	29.8	29.7	40.4
Other Nondurables	0.0	42.1	52.6	5.3	0.0	9.4	87.8	2.8
TOTAL NONDURABLES	7.8	34.8	36.2	21.3	0.1	34.6	47.2	18.0
ALL MANUFACTURING	8.4	34.4	37.1	20.1	1.7	34.4	48.5	15.4
Mining	15.0	45.0	25.0	15.0	20.3	38.6	33.6	7.4
Railroads	0.0	33.3	44.4	22.2	0.6	11.1	54.8	34.1
Airlines	28.6	28.6	28.6	14.3	0.0	47.5	46.9	5.6
Electric Utilities	3.2	22.6	67.7	6.5	0.0	22.3	71.5	6.2
Gas Utilities	10.0	30.0	50.0	10.0	0.7	61.8	34.5	3.0
Communications & Other	0.0	35.7	42.9	21.4	0.0	1.3	97.9	0.8
Trade & Services	15.8	39.5	31.6	13.2	6.5	46.3	45.7	1.5
ALL NONMANUFACTURING	10.1	34.1	42.6	13.2	3.9	32.7	55.0	8.4
ALL BUSINESS	8.9	34.3	38.8	18.0	2.4	33.9	50.4	13.4

Rapid Real Growth: 4% or higher Normal Real Growth: 2.5% to 3.9%
Slow Real Growth: 1.0% to 2.4% Recession: Less than 1%

TABLE VI

ENERGY CONSERVATION

INDUSTRY	% Capital Spending Devoted to Conservation 1981 Estimated	1982 Expected
Iron & Steel	7.9%	7.3%
Nonferrous Metals	5.2	6.7
Electrical Machinery	5.1	4.6
Machinery	4.7	5.2
Autos, Trucks & Parts	4.4	2.7
Aerospace	3.6	3.7
Fabricated Metals	3.7	3.9
Instruments	1.5	1.4
Stone, Clay & Glass	7.1	4.7
Other Durables	5.5	6.2
TOTAL DURABLES	4.9	4.6
Chemicals	5.4	5.2
Paper & Pulp	5.8	7.5
Rubber	7.2	7.4
Petroleum	2.1	1.9
Food & Beverages	5.1	3.9
Textiles	6.6	5.9
Other Nondurables	4.4	4.6
TOTAL NONDURABLES	4.2	4.1
ALL MANUFACTURING	4.6	4.5
Mining	3.8	3.6
Railroads	2.4	2.4
Airlines	5.5	3.1
Electrical Utilities	1.5	1.6
Gas Utilities	1.7	1.5
Communications & Other	2.6	2.6
Trade & Services	2.4	2.6
ALL NONMANUFACTURING	2.4	2.5
ALL BUSINESS	3.4	3.4

TABLE VII

SURVEY SAMPLE SIZE

INDUSTRY	Percentage of Capital Spending Covered by Survey
Iron & Steel	60.4%
Nonferrous Metals	27.4
Electrical Machinery	39.2
Machinery	16.2
Autos, Trucks & Parts	79.3
Aerospace	24.8
Fabricated Metals	7.9
Instruments	67.2
Stone, Clay & Glass	29.5
Other Durables	2.2
TOTAL DURABLES	34.7
Chemicals	41.1
Paper & Pulp	42.8
Rubber	66.4
Petroleum	83.1
Food & Beverages	25.6
Textiles	16.3
Other Nondurables	32.7
TOTAL NONDURABLES	53.7
ALL MANUFACTURING	44.0
Mining	8.0
Railroads	88.4
Airlines	42.1
Electric Utilities	55.4
Gas Utilities	32.9
Communications & Other	49.6
Trade & Services	4.1
ALL NONMANUFACTURING	26.7
ALL BUSINESS	33.5